

Application No. 10/697,304
Amendment dated May 21, 2007
Reply to Office Action of February 21, 2007

Docket No.: 0698-0165P

REMARKS

Claims 1-15 are pending in the present application. Claims 1, 8 and 10 have been amended, and claims 11-15 have been added.

Claim Objections

Claim 10 is objected to because of certain informalities, as set forth at page 2, paragraph 2 of the Office Action.

As will be seen by the above amendments, claim 10 has been amended as suggested by the Examiner. Accordingly, reconsideration and withdrawal of the objection to claim 10 are respectfully requested.

Claim Rejections – 35 U.S.C. § 112

Claims 1 and 8 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. This rejection is respectfully traversed.

As will be seen by the above amendments, claim 1 has been amended by canceling the phrase “, electronic information appliance” and by replacing the phrase “handing over *the* authorization of ...” with --handing over *an* authorization of ...-- (emphasis added), as suggested by the Examiner.

Application No. 10/697,304
Amendment dated May 21, 2007
Reply to Office Action of February 21, 2007

Docket No.: 0698-0165P

Additionally, claim 8 has been amended to replace the phrase "*the* sequence of the parameters" with --*a* sequence of the parameters-- (emphasis added), as suggested by the Examiner.

In view of the above, reconsideration and withdrawal of the rejections under 35 U.S.C. § 112 are respectfully requested.

Claim Rejections – 35 U.S.C. § 103

Claims 1-3, 5, 6 and 8-10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Falkenberg (U.S. Published Application 2003/0056115) in view of Torrubia-Saez (U. S. Patent 6,683,546). This rejection is respectfully traversed.

Claims 4 and 7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Falkenberg, in view of Torrubia-Saez, and further in view of Alexander et al. (U. S. Patent 6,188,602). This rejection is respectfully traversed.

As will be seen by the above amendments, claim 1 has been further amended by incorporating the technical features of "the firmware arranging parameters of corresponding specific embedded software and providing a default parameter address, so as to enable execution of the embedded software corresponding to the firmware only in the authorized electronic information appliance," "having the second program decode parameters from the second address," and "having the second program determine whether the rearranged parameters are correct, wherein if the parameter are correct, enabling the execution of the embedded software in

Application No. 10/697,304
Amendment dated May 21, 2007
Reply to Office Action of February 21, 2007

Docket No.: 0698-0165P

the electronic information appliance; if the parameters are not correct, prohibiting the execution of the embedded software in the electronic information appliance.”

Falkenberg discloses a system for and method of protecting data in firmware modules of an embedded system. Falkenberg's primary technical features are dividing the firmware into a private data section having data to be protected, and a public code section. Access to functions in the public code section is allowed to an external code. Therefore, data in the private data section can be protected from being read unexpectedly. In summary, Falkenberg's technical feature is to divide a memory of the firmware into a private data and a public code section, and limit only public functions defined in a code section to access data in the private data section.

In contrast, the subject matter of the present invention is going to solve is not protecting private data from being read, but preventing specific software (storage management software) from being used in an unauthorized electric information appliance. Regarding the technical features, the present invention does not provide dividing the firmware into a private data section and a public code section and storing protected data into the private data section, as disclosed by Falkenberg, but discloses “having the firmware” (for example, BIOS in the embodiment of the present invention) to rearrange parameters of a first program of an embedded software stored in a first address and store the rearranged parameters in a second address of the storage device, and having a second program of the embedded software read and determine the parameters in the second address are correct, for the embedded software to identify whether to execute its functions in the electronic information appliance.

Application No. 10/697,304
Amendment dated May 21, 2007
Reply to Office Action of February 21, 2007

Docket No.: 0698-0165P

Therefore, Falkenberg does not disclose or teach the present invention's having the firmware rearrange parameters of a first program of the embedded software stored in the first address of the storage device and store the rearranged parameters into the second address of the storage device. Furthermore, although the Examiner combines Torrubiya-Saez's determining whether a signature is correct with a hooking routine and informing appropriate routines of an operation system to execute the signature after determining a result is correct, steps (1) and (2) recited in amended claim 1 are different from what Falkenberg has disclosed, and the combination of Torrubiya-Saez and Falkenberg cannot render the present invention obvious.

Additionally, Torrubiya-Saez is different from the present invention in that the present invention uses the first and second program of "the same" software to provide parameters and determine the rearranged parameters, respectively. Therefore, the technical features and achieved effectiveness of the present invention cannot be anticipated by Torrubiya-Saez and Falkenberg.

Accordingly, it is believed that the claims clearly distinguish over the Falkenberg, taken alone or in combination with Torrubiya-Saez and Alexander. Therefore, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103 are respectfully requested.

New Claims

New independent claim 11 sets forth a method for protecting embedded software from being copied and used without authorization, applying on an electronic information appliance comprising a RAM and a NVRAM, which method comprises the steps of receiving a quest with

Application No. 10/697,304
Amendment dated May 21, 2007
Reply to Office Action of February 21, 2007

Docket No.: 0698-0165P

a plurality of parameters from a user to the embedded software; storing the parameters to the RAM in a first type in a first address getting the parameters in a first type from the RAM; changing the parameters to a second type and storing the parameters in the second type in the NVRAM; and clearing the parameters in the RAM.

Claim 12 sets forth that the embedded software executes the quest with the parameters by getting the parameters in the second type from the second address of the storage device; claim 13 sets forth that the parameters to the second type are changed by changing a sequence of the parameters; claim 14 sets forth that the parameters to the second type are changed by coding a content of the parameters; and claim 15 sets forth that the storage device is a buffer in a memory.

Claims 11-15 are also believed to be allowable over Falkenberg, either alone or in combination with Torrubia-Saez and/or Alexander.

Conclusion

Favorable reconsideration and an early Notice of Allowance are earnestly solicited.

In the event that any outstanding matters remain in this application, the Examiner is invited to contact the undersigned at (703) 205-8000 in the Washington, D.C. area.

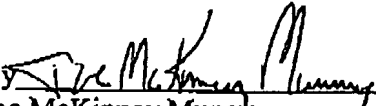
Application No. 10/697,304
Amendment dated May 21, 2007
Reply to Office Action of February 21, 2007

Docket No.: 0698-0165P

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Dated: May 21, 2007

Respectfully submitted,

By 
Joe McKinney Muncy
Registration No.: 32,334
BIRCH, STEWART, KOLASCH & BIRCH, LLP
8110 Gatehouse Road
Suite 100 East
P.O. Box 747
Falls Church, Virginia 22040-0747
(703) 205-8000
Attorney for Applicant